

Spiritual Development Across the Adult Life Course: Findings From a Longitudinal Study

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Longitudinal data spanning early (30s) and older (late 60s/mid-70s) adulthood were used to study spiritual development across the adult life course in a sample of men and women belonging to a younger (born 1928/29) and an older (born 1920/21) age cohort. All participants, irrespective of gender and cohort, increased significantly in spirituality between late middle (mid-50s/early 60s) and older adulthood. Members of the younger cohort increased in spirituality throughout the adult life cycle. In the second half of adulthood, women increased more rapidly in spirituality than men. Spiritual involvement in older age was predicted by religious involvement and personality characteristics in early adulthood and subsequent experiences of negative life events.

KEY WORDS: spiritual growth; life-course; social context; negative life events; cognitive commitment.

INTRODUCTION

The idea that spirituality increases in the second half of adult life dates back at least to Confucius (479 B.C./1979) who is alleged to have said, "at fifty I understood the Decree of Heaven" (p. 63). In this study we investigate the nature and causes of spiritual growth with longitudinal data that span early adulthood and old age. To our knowledge, there are no quantitative longitudinal data addressing the issue of spiritual development in adulthood. Most of the evidence on the subject comes from the study of individual lives (e.g., Bianchi, 1987; Tornstam, 1999) and the analysis of myths (Jung, 1964) and fairy tales (Chinen, 1989). In reviewing the relevant literature we will first briefly discuss some of the conceptual issues involved in defining spirituality. We then discuss general theories of spiritual change in adulthood, and the specific social and personal contexts that may facilitate

or hinder spiritual growth. Finally, we will consider the relation between spirituality and recent cultural shifts in American society.

Defining Spirituality

The recent expansion of interest in spirituality in America (Roof, 1993) has been accompanied by scholarly attempts to offer a more precise definition of the construct and to articulate the ways in which it differs from and complements religiosity. As used by social researchers, religiosity generally refers to indicators of church membership, attendance at church services, and/or participation in other organized religious activities (e.g., Hout & Greeley, 1987; Myers, 1996; Stolzenberg, Blair-Loy, & Waite, 1995), whereas the concept of spirituality has had a much more diverse and fuzzier history (Farina, 1989; Zinnbauer et al., 1997). In general, spirituality connotes the self's existential search for ultimate meaning through an individualized understanding of the sacred (Atchley, 1997; Roof, 1993, 1999; Tillich, 1963). This quest tends to be relatively autonomous of institutionalized religious traditions (Roof, 1993, 1999), even though, in practice, of course, religiously involved individuals can also be spiritually engaged (Zinnbauer et al.,

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1997). Critics denouncing the overuse of the term have argued that spirituality is permissively invoked to refer to a wide range of idiosyncratic personal experiences (of nature, love, exhilaration) that are frequently devoid of the obligations, commitments, and practices that are associated with religious involvement (e.g., Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985).

In recent years, however, scholars have offered a more discipline-oriented definition of spirituality that clarifies the content and boundaries of the construct. Wuthnow (1998), for example, drawing on a long tradition in religious formation (e.g., dating back to Saints Ignatius and Benedict), emphasizes a practice-oriented spirituality, one that is based on performance of intentional activities aimed at relating to the sacred. Similarly, Atchley (1997) argues that spirituality involves the integration of interior and exterior experiences through systematic practice. Practice-oriented spirituality thus demands a commitment, depth, and focus that is not found in the shallowness and transience of a more limited, seeking-oriented spirituality (Wuthnow, 1998). It is this practice-oriented understanding of spirituality that informs this study. In this framing, spiritual development demands not only an increase in the depth of a person's awareness of, and search for, spiritual meaning over time, but it also requires an expanded and deeper commitment to engagement in actual spiritual practices. There has to be evidence that the person works at developing and nourishing their spirituality in everyday life and engages in practices that protect the original experience of transcendence (Neuman, 1982).

Our definition of spiritual development differs from Fowler's concept of faith development (Fowler, 1981) in two ways. First, although Fowler emphasizes the link between higher stages of faith development and greater social and ethical awareness and argues that faith must be lived as a pattern of being in relation to others and to God, he pays little attention to actual "practices." He instead focuses on the developmental shifts in how people construct meaning in life. Second, Fowler's definition equates faith development with any type of quest for meaning even if such strivings do not involve the concept of transcendence.

General Theories of Spiritual Growth

There are two broad models of spiritual development in the second half of adulthood. Proponents of the first model construe spiritual growth as the

positive outcome of the maturation process. For example, Jung (1943, 1964) argued that around midlife individuals typically begin to turn inward to explore the more spiritual aspect of the self. Prior to this stage, external constraints associated with launching a career and establishing a family tend to be paramount. An overemphasis on worldly success becomes problematic, however, with the increased awareness of one's mortality that comes at midlife. The inward turn that characterizes the second half of adulthood complements, according to Jung, the outer directed orientation of young adulthood in a way that expands one's sense of the self and thus completes the process of self-realization (see Wink, 1999).

From a very different tradition, proponents of postformal stages of cognitive development share with Jung the idea that spirituality is the product of the maturational process that occurs in the course of adult life (Alexander et al., 1990; Sinnott, 1994). Having experienced the ambiguity and relativity of human life, middle aged and older adults tend to go beyond the linear and strictly logical modes of apprehending reality described by Piaget's model of early cognitive development (e.g., Piaget & Inhelder, 1969). The newly evolved way of viewing the world embraces the notion of paradox and incorporates feelings and context as well as logic and reason in making judgments, a turn that is conducive to spiritual quest and yearnings.

The second model of spiritual development conceptualizes the connection between spirituality and older age more in terms of constraints and adversity than of the growth process. Atchley (1997), for example, suggests that ageism and age discrimination push many older adults to spirituality, presumably by fostering disengagement and curtailing life choices. Further, physical aging, while restricting one's mobility, creates opportunities to experience meditation and contemplative silence, and thus facilitates spiritual development. For reasons similar to Atchley's, Burke (1999) suggests that the adverse social conditions and discontinuities experienced by African Americans may explain why Black women interviewed in her study tended to be more spiritual than White women. McFadden (1996a) proposes that spirituality may be especially meaningful in old age because of the many losses and difficulties encountered in late life. Obviously, the "growth" and "deficit or adversity" models of spiritual development are not mutually exclusive because a deficit may trigger growth. Access to longitudinal data, therefore, is necessary so that researchers may identify the phases in the life-course

when spirituality emerges, and pinpoint whether spiritual development is advanced by specific "growth" or "adverse" life-experiences in old age, or both, or is nurtured by negative life-events experienced at earlier stages in adulthood.

Empirical support for the general models of spiritual development outlined above comes primarily from retrospective case studies and cross-sectional research. In interviews with 22 older age men and women, Bianchi (1987) uncovered retrospective evidence of a transformation of earlier religious and ethical interest into a less moralistic and more personalized spirituality by midlife. Using larger and more representative samples, Tornstam (1994, 1999) found retrospective evidence for a self-perceived shift toward gerotranscendence (i.e., a move away from a materialistic and pragmatic view of the world toward a more cosmic and transcendent one) among older adults. In a cross-sectional study, Fowler (1981) reported a positive relation between age and higher stages of faith development characterized by a sense of unity and personal transcendence. Support for an association between age and changes in modes of knowing that are conducive to spiritual development was provided by Labouvie-Vief, DeVoe, and Bulka (1989), who found a positive relation between age and the ability to integrate cognitive and emotional perspectives, including a greater comfort with metaphor and subjectivity.

Social and Personal Contexts for Spiritual Development

According to Stokes (1990), changes in the "process of making sense of life's meaning and purpose" (p. 176) occur more frequently during periods of transition and crisis than during times of stability. Thus spiritual development may be more influenced by changes in social and personal context than chronological age, although the two are frequently related because being older increases the chance of having experienced crisis and adversity. Personal crises associated with spirituality range from experiencing the death of someone close (Tornstam, 1994) to the need to adopt a caregiver role because of illness of spouse (Payne, 1994). As argued by Riegel (1976), any disequilibrating experience can be conducive to the process of psychological change.

The fact that women have a greater involvement than do men in organized religious activities (Hout & Greeley, 1987; McFadden, 1996b; Stolzenberg et al.,

1995) raises the possibility that spiritual growth may occur as a result of broader social forces than those associated with experiencing a personal crisis. Women's greater participation in organized religion may provide a stepping stone toward spiritual growth (Burke, 1999; Stokes, 1990; but see Zinnbauer et al., 1997, who found that spiritual individuals tended to report having being hurt by clergy). It is also possible that gender inequality in family, work, and other social relations may cause women to experience more of the discontinuities and decentering experiences that are associated with personal growth in general (Riegel, 1976) and spiritual development in particular (Atchley, 1997; Burke, 1999).

The development of spirituality has also been associated with individual differences in personality, including greater individualism (Roof, 1993, 1999) and a stronger need for independence (Zinnbauer et al., 1997). Shulik (1988) argues for the presence of a positive relation between spiritual, ego, and moral development. If, indeed, there is a central or common process to all three of these types of development, then spiritual growth should be facilitated by such personal characteristics as autonomy, insight, openness to experience, and cognitive interests. In other words, if Kastenbaum (1993) is correct in describing older individuals who remain stable in their religious beliefs as being "cognitively impoverished and rigid" (p. 193), then those who experience spiritual development should be cognitively invested and flexible.

The likelihood of an association between spiritual and cognitive development (Sinnott, 1994) raises questions about the role of intelligence in the process of spiritual growth. Gardner (1993) does not include spirituality in his multifaceted model of intelligence. Emmons (1999), however, favors the notion of a spiritual intelligence because he argues that spirituality has the capacity to enhance an individual's level of adaptive functioning.

Spirituality and Culture

Recent years have witnessed an explosion of public interest in spirituality in America. A 1998 Gallup Poll (Gallup & Lindsay, 1999) reported that 8 of 10 Americans (82%) believe that they need to experience spiritual growth, a finding that characterized all subgroups of the population. It is evident that the search, first identified by Marty (1967) in the 1960s, continues for a spiritual style that fits with the pluralism of the larger culture. Roof (1993) attributes the

Table I. Design of the IHD Longitudinal Study (Adulthood)

Year of assessment	N	Age of participants		Age period	Relevant measures
		Younger	Older		
1958-59	232	31-32	37-38	Early adulthood (30s)	Interview ratings (spirituality, religiosity, cognitive commitment, negative life events), IQ
1969-70	233	41-42	48-50	Middle adulthood (40s)	Interview ratings (spirituality, cognitive commitment, negative life events)
1982	233	53-54	61-62	Late middle adulthood (mid-50s/early 60s)	Interview ratings (spirituality, cognitive commitment, negative life events)
1997-99	154	68-70	77-79	Older adulthood (late 60s/mid-70s)	Interview ratings (spirituality, religiosity negative life events)

surge of interest in spirituality to the baby boom generation's quest for personal and transpersonal meaning outside of the confines of organized religion. Since the 1960s, a new "generation of seekers" (Roof, 1993) has turned to Jungian psychology, Eastern philosophies and practices, and a variety of self-help groups and manuals to satisfy their spiritual needs. As suggested by Wuthnow (1998), many Americans are no longer content to dwell within the religious institutions of their ancestors but seek alternatives that meet their unique personal needs and predilections.

The likelihood that Americans as a group or cohort have increased in their spiritual interests since the 1960s has implications for the study of how individuals change over time. In cross-sectional research, a cultural shift toward spirituality may result in spurious findings, such as those of Levin (1993) who found greater interest in mystical experiences among younger individuals, that reflect cohort effects rather than age-related changes. In longitudinal research, this problem may cause an ambiguity in the interpretation of findings. If the same group of persons was to increase in spirituality with age at a time when there is a simultaneous cultural shift in spiritual interests, then this would raise uncertainty as to whether the changes that occurred at the personal level are the result of individual growth, or whether they are due to the external influence of having access to new spiritual resources (books, groups, meditation techniques) and/or acquiring a new vocabulary to communicate old knowledge.

Hypotheses

In this study we explore the influence of age, cohort, and gender on spiritual development from early to older adulthood with data from a longitudinal study that originated at the Institute of Human Develop-

ment (IHD) at the University of California, Berkeley. The study participants are equally divided among men and women and comprise two age cohorts with older participants being born in the early 1920s and the younger participants being born in the late 1920s. The participants were interviewed four times in adulthood between the late 1950s and the late 1990s (see Table I).

As indicated at the outset of the paper, following Atchley (1997), Neuman (1982), and Wuthnow (1998), we use a practice-oriented definition of spirituality. In accord with this perspective, spiritual development requires that there must not only be an increase in the individual's awareness of the sacred in everyday life, but there must also be a concomitant increase in commitment to and engagement in intentional spiritual practices.

Our first set of hypotheses concerns mean level changes in spirituality from early to older adulthood. If involvement in practice-oriented spirituality increases in the second half of adult life, then participants in this study should be more spiritual in their 50s, 60s, and 70s than when in their 30s and 40s. If women are more predisposed to spiritual development, then they should be more spiritual than men in middle and older adulthood, but not necessarily in young adulthood, when spirituality is relatively dormant. If the recent cultural shift toward greater spirituality has had an impact on our participants, then members of the younger cohort, who were in their 30s during the Sixties era of social turmoil, may increase in spirituality earlier in life than members of the older cohort. There is no theoretical or theological reason to assume that participants affiliated with one religious tradition as opposed to another (e.g., Protestant vs. Catholic) would be more likely to become more spiritual as they age.

Our second set of hypotheses concerns predicting spiritual involvement in older adulthood from personality and cognitive characteristics in early adulthood

and subsequent experiences of negative life events. If spiritual growth is associated with cognitive (e.g., Sinnott, 1994), and ego and moral (Shulik, 1988) development, then young adults who are psychologically minded and who are interested in cognitive matters should become more spiritual in older age than those who do not have such dispositions. It is uncertain, however, whether IQ is conducive to spiritual growth. If spiritual development is enhanced by adversity, then those individuals who experience negative life events should become more spiritual than those who did not experience adversity. It may also be the case that spiritual development is particularly true of individuals who are both psychologically minded and who have experienced personal crises. Finally, if a religious background acts as a stepping stone to spiritual development, then participants who were involved in organized religious activities in early adulthood should be more spiritual in older age than those with little or no history of religious involvement.

METHOD

Sample

The data for this research comes from the intergenerational studies established by the IHD at the University of California, Berkeley, in the 1920s. The original sample was a randomly generated representative sample of newborn babies in Berkeley, CA, in 1928/29, and of preadolescents (ages 10–12) selected from elementary schools in Oakland, CA, in 1931 (and who were born in 1920/21). Both cohorts were combined into a single IHD study in the 1960s. All participants in the study were assessed intensively in childhood and adolescence, and have been interviewed in-depth four times in adulthood: in 1958/59 (when they were in their 30s), 1969/70 (40s), 1982 (mid-50s/early 60s), and most recently, in 1997–99 (late 60s/mid-70s). At each interview phase, the participants also completed self-administered questionnaires (see Table I).

A total of 290 participants took part in at least one of the first three follow-up studies in adulthood with an average of just over 230 participants per assessment (see Table I). By the time of the fourth assessment conducted in older adulthood, 68 of the 290 participants (24%) had died, and a further 33 (11%) were lost to follow-up. Of the remaining 189 participants, 154 (81%) took part in the fourth adult assessment.

Because this study involves analyses using longitudinal data from all four assessments in adulthood, we restricted the sample to a core group of 130 individuals (67 women and 63 men) for whom there was interview data for all four time-periods. Two thirds of the participants belonged to the younger age cohort ($N = 83$), and one third ($N = 47$) were members of the older age group.

The attrition rate from the IHD study has been low. In his analysis of dropout rates from adolescence to late middle adulthood, Clausen (1993) found a somewhat higher attrition rate among individuals from lower socioeconomic and troubled family backgrounds. A comparison of scores on the California Psychological Inventory (CPI; Gough & Bradley, 1996) of individuals who took part in the assessment in older adulthood (1997–99) with those who participated in the assessment in late middle adulthood (1982), but who declined to be interviewed in 1997–99, showed few differences. On the CPI's three higher order summary scales, the two groups did not differ in their level of self-realization and acceptance of norms of social conduct. Those who participated in 1982 but not in 1997–99 were significantly less socially poised or extraverted.

Sample Sociodemographic Characteristics

Because the initial samples were drawn randomly, there is a good distribution of social class origins in the current sample. The fathers of one third of the 130 participants in the current study were college graduates, a further one third graduated from high school, and the remaining third of fathers had either some high school experience (10%) or none (23%). Among the 63 male participants, 31% had a graduate degree, 37% graduated from college, and the rest had either graduated from high school or had some college education. Among the 67 women participants, 5% held a graduate degree, 30% graduated from college, 33% had some college education, and 33% completed high school. All of the participants are White, with the exception of two African American women members. Ninety percent of the participants had been married, 86% had children, and 13% had been divorced. Sixty-nine percent grew up in Protestant families, 22% came from Catholic family backgrounds, and 3% grew up in Jewish families.

At the time of last follow-up study (1997–99), 52% of the interviewees were not religiously

affiliated, 35% identified themselves as Protestant, and 13% were Catholic. Fifty-five percent of participants said that religion was important or very important to them currently, 38% said it was somewhat important, and 7% said it was not at all important to them. Almost half of the sample reported an annual household income less than \$50,000, 32% had an annual household income between \$50,000 and \$100,000, and 21% had income over \$100,000. Over half of the sample described themselves as Republican (55%), 31% were Democrats, and 14% had no party affiliation. The vast majority of the participants were in very good health (61%), whereas over one third (39%) had one or more chronic health problems.

Measures

Spirituality

Spirituality was coded from responses to open-ended questions included in interviews conducted at four different time periods spanning the decades of the 1950s and 1990s. Not unexpectedly, the specific questions asked of the participants varied somewhat from one assessment to another reflecting variations in academic and societal interest in spirituality and religion during each period.

At Adult 1 (1958/59), the older cohort were asked open-ended questions about the place of religion in their lives, their church attendance habits, and their beliefs about God and the afterlife, and the younger cohort were asked to talk about their religious attitudes, beliefs, and practices. At Adult 2 (1969/70), following the merger of the two cohorts into a single study, all participants were asked open-ended questions about church membership and attendance, and their beliefs about God and the afterlife. At Adult 3 (1982), participants completed close-response questions about church membership and involvement in church activities (such as Sunday School/study groups). In addition, in the semistructured interview they were given the opportunity to discuss religious and spiritual matters in response to open-ended questions about recreational interests, hobbies, and involvement in organized activities.

The interview at Adult 4 (1997-99) contained several detailed questions on religion, and for the first time, explicitly probed the participants about their spirituality. Respondents were asked open-ended

questions about their religious affiliation, church attendance, spiritual practices (e.g., meditation, specific reading) and beliefs about God, and life after death. The participants were also asked about the role played by the transcendent in shaping the meaning of their lives, and to talk about any religious or spiritual experiences that they have had.

All of the interview excerpts pertaining to religion and spirituality from the four assessments in adulthood were first identified, then photocopied, and given a discrete, randomly generated number that did not identify the participant. The interview excerpts were then rated independently for spirituality by two experienced coders with the use of a 5-point scale. Following Atchley (1997), Wuthnow (1998), and Roof (1999), spirituality was defined in terms of the importance of a personal quest for a sense of connectedness with a sacred Other (God, nature, a higher power). A score of 5 was assigned to individuals for whom a personal quest for a sense of connectedness with a sacred other plays a *central* role in daily life; the respondent is a seeker who consistently engages in systematic practices (e.g., meditation, experiential or fellowship groups, Shamanic journeying, receiving spiritual counseling) aimed at deriving meaning from, and nurturing a sense of interrelatedness with, a sacred Other. A score of 4 was given to persons who reported personal spiritual experiences and who consistently incorporated spiritual practices in their daily life. A score of 3 was assigned to individuals who reported having personal spiritual experiences and who occasionally engaged in some spiritual practices. A score of 2 was given to persons who expressed some interest in spiritual issues (e.g., a sense of continuity between self and nature) or reported some spiritual experiences (e.g., oceanic experiences when contemplating nature), but who did not engage in any spiritual practices. A score of 1 was assigned to individuals who denied any interest in spiritual matters.

Responses were coded for the presence or absence, rather than in terms of the specific number or range, of indicators of both spiritual interests and spiritual practices. In other words, participants who engaged in two or more spiritual practices were not necessarily rated as being more spiritual than participants who engaged in one spiritual practice. Rather, what was critical was the extent to which the spiritual practice was intentionally incorporated in everyday life. Spirituality, therefore, was measured in a way that attempted to make it not contingent on the verbosity

or narrative complexity of the interviewee's response to the questions asked.

The correlations between the two coders' sets of ratings of spirituality ranged from a low of $r(130) = .82$ for the assessment in middle adulthood (40s) to a high of $r(130) = .88$ for the assessment in early adulthood (30s). The Kappas ranged from .59 for older adulthood to .77 for early adulthood indicating an acceptable level of agreement between the two raters. The rating of spirituality was unrelated to the participant's level of education, $r(130) = .03$, *ns*, but was significantly related to the length of the interview passage (measured in lines), $r(130) = .53$, $p < .001$.

Religiosity

Religiosity was defined as the *importance of religion* in the lives of the participants as reflected by their attendance at a place of worship or by the centrality of religion in their lives or by both. The materials and procedure for coding religiosity were the same as for spirituality. The 5-point religiosity rating scale ranged from a high of 5 (frequent church attendance and religion seen as playing a central role for the respondent in making sense of life) to a low of 1 (absence of church attendance and lack of belief in God; see Dillon & Wink, 2000).

The correlations between the two coders' sets of ratings of religiosity ranged from a low of .88 for late middle adulthood (mid-50s/early 60s) to a high of .94 for late adulthood (late 60s/mid-70s). The Kappas ranged from a low of .63 for late middle adulthood to a high of .69 in early adulthood (30s). The rating of religiosity was not related to the participant's level of education, $r(130) = -.10$, *ns*, but was related significantly to the length of the interview passage, $r(130) = .38$, $p < .001$. In older adulthood, scores on the measure of religiosity correlated .87 with self-reported church attendance as assessed by the Duke Religious Index (Koenig, Meador, & Parkerson, 1997).

Personality

Personality characteristics of the participants were rated from the interview transcripts for each of the four assessments in adulthood by a minimum of three independent judges. These ratings were done using the California Q-set (CAQ), a 100-item, ipsative, global measure of personality developed by Block (1978). The q-sort ratings for late adolescence, and

the first three adult assessments (early, middle, and late middle adulthood) were reduced to six dimensions or component scores (self-confidence, assertiveness, cognitive commitment, outgoingness, dependability, and warmth). This reduction was performed using component analysis, a statistical procedure similar to factor analysis that takes into account relations between items at more than one time period (Haan, Millsap, & Hartke, 1986). In this study, we included the CAQ-based component scores for *cognitive commitment* for each of the three time periods in adulthood, and for a subsample of 80 participants for whom q-sort data from late adolescence was also available. Cognitive commitment measures the degree to which an individual is introspective, evaluates situations and motives of others, shows insight, has a wide range of interests, and thinks unconventionally.

Intelligence

The participants were administered the full form of the WAIS (Wechsler, 1955) in early adulthood. In this study we use scores on the Full Scale as measures of the participants' intelligence quotient.

Negative Life Events

A team of trained raters coded for the presence of a wide array of life events (positive and negative) with the use of full transcripts of the interviews conducted with the participants in early, middle, and late middle adulthood. A single rater coded each transcript with the use of a list of 35 possible life events adapted from a rating scale used in previous IHD assessments. The list included events indicative of normative changes in social status (marriage, parenthood, grandparenthood, retirement), deaths (of spouse/child/parents/other relatives/friends), major illnesses (of self/spouse/child/parent), and explicit references to conflict in the family, psychotherapy, financial strain, problems at work, major geographic moves, and changes in social network. Interviews at a given time period were used to rate for the presence of life events in the time period immediately preceding the interview. For example, interviews at middle adulthood were used to code for the presence of life events from early to middle adulthood. The presence or absence of each life event was scored using a dummy 0/1 code.

The index of negative life events was developed by excluding from the list of 35 all events that reflected normative changes in the life of the individual (e.g., parenthood, marriage, children no longer at home) and other events that did not have clear negative implications (e.g., move to a different geographic location, going back to school). The remaining list of 20 possible negative events included items such as the death of a relative or close friend, major illness of self or family member, personal crisis, major conflict in the family, and financial strain or unemployment, that occurred in a given time period. The measure of negative events was scored separately for the three time intervals (adolescence-to-early adulthood, early-to-middle adulthood, and middle-to-late middle adulthood). A total score summing across the three time periods was also calculated. A measure of negative live events occurring between late middle and older adulthood was scored from a self-reported (rather than interview-based) check-list of life events (similar to the list of events derived from the earlier interviews) provided by the participants during the assessment in older adulthood.

RESULTS

Relation Between Spirituality and Religiosity

For the total sample ($N = 130$), the correlation between observer-based ratings of spirituality and religiosity ranged from a low of .30 ($p = .001$) in early adulthood (30s) to a high of .38 ($p < .001$) in older adulthood (60s/70s). For women ($N = 67$), the correlations ranged from a low of .20 ($p < .10$) in early adulthood to a high of .33 ($p < .001$) in late middle adulthood. For men ($N = 63$), the correlations ranged from a low of .17 (*ns*) in late middle adulthood to a high of .42 ($p = .001$) in early middle adulthood.

Rank Order Stability of Spirituality Over Time

Table II shows the rank order stability (intercorrelation) across four time periods for scores on the 5-point scale measuring spirituality. The average intercorrelation for spirituality across the different time periods was lower for women, $r(67) = .41$, than for men, $r(63) = .55$. For women, individual scores on the measure of spirituality in older adulthood (60s/70s) were predicted from spirituality in late middle adulthood (50s) but not from earlier time periods. For men,

Table II. Rank Order Stability of Spirituality Across Four Age Periods

Age period in adulthood	Spirituality			
	1	2	3	4
Early	—	.36	.30	.29
Middle	.50	—	.37	.48
Late middle	.42	.70	—	.68
Older	.45	.62	.60	—

Note. Data for women are above the diagonal ($N = 67$); data for men are below the diagonal ($N = 63$). All correlations significant at the .05 level or below.

there was little variability or change in rank ordering past middle adulthood (40s).

Mean Level Changes in Spirituality Over Time

The hypothesis concerning time-related changes in spirituality was investigated using a two-way repeated measures ANOVA with spirituality for the four age periods as the within-subjects factor, and gender and cohort as the between-subject factors. (See Figs. 1 and 2 for means and standard deviations.) Among the two between-subject factors, gender had a significant effect on spirituality, $F(1, 126) = 7.06$, $p < .05$. Cohort did not have a significant effect on spirituality, $F(1, 126) = .00$, *ns*. The gender by cohort interaction was not significant, $F(1, 126) = 1.18$, *ns*.

The within-subject factor of age had a significant effect on spirituality, $F(3, 124) = 20.90$, $p < .001$. The two-way interactions between age and cohort, $F(3, 124) = 5.16$, $p = .001$, and age and gender, $F(3, 124) = 2.94$, $p < .01$, were also significant. The interaction between age, gender, and cohort was not significant. Because of the presence of interaction effects, we do not interpret the main effects.

The age by gender interaction was due to two factors (see Fig. 1). First, both women, $t(66) = 6.46$, $p < .001$, and men, $t(62) = 3.33$, $p = .001$, increased significantly in spirituality from late middle to older adulthood, but only men increased in spirituality from early to middle adulthood, $t(62) = 1.95$, $p = .05$, and only women showed a tendency to increase in spirituality from middle to late middle adulthood, $t(61) = 1.76$, $p < .10$. Secondly, women and men did not differ in spirituality in early or middle adulthood, but because of a higher rate of spiritual growth, women tended to be more spiritual than men in late middle adulthood, $t(128) = 1.81$, $p < .10$, and were significantly more spiritual in older adulthood, $t(128) = 3.41$, $p = .001$.

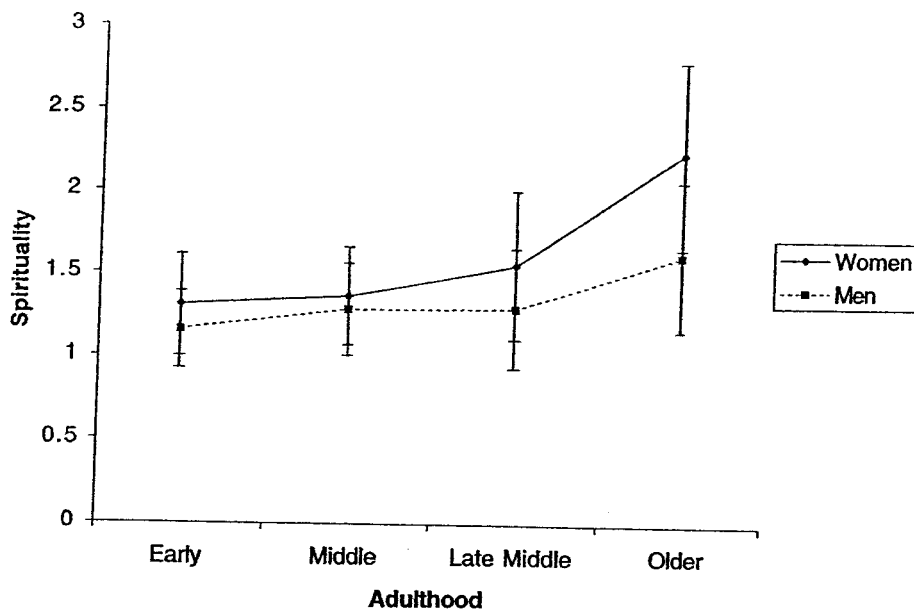


Fig. 1. Level of spirituality for four age periods (gender analysis).

The finding of an age by cohort interaction was due to the fact that members in the younger age group increased significantly in spirituality throughout their adulthood, that is, from early to middle adulthood, $t(82) = 3.87, p < .001$; middle to late middle adulthood, $t(82) = 2.35, p < .05$; and late middle to older adulthood, $t(82) = 4.53, p < .001$

(see Fig. 2). In contrast, members of the older group increased significantly in spirituality only from late middle to older adulthood, $t(46) = 6.00, p < .001$. A t test group comparison indicated that members of the older age cohort were significantly more spiritual than their younger counterparts in early adulthood, $t(128) = 3.02, p < .01$. Members of the younger age

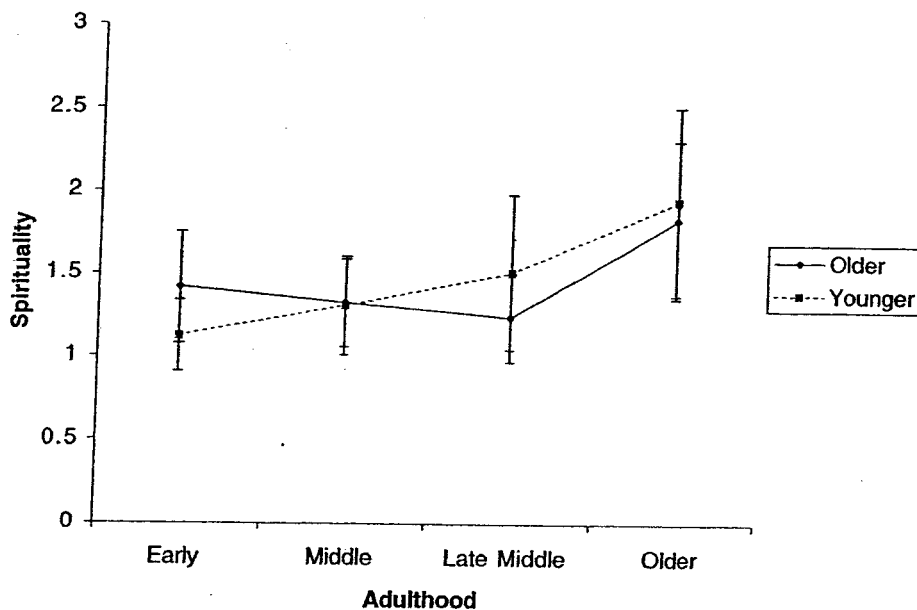


Fig. 2. Level of spirituality for four age periods (cohort analysis).

cohort were significantly more spiritual in late middle adulthood, $t(128) = 2.13, p < .05$.

Finally, we conducted a one-way repeated measures ANOVA with spirituality for the four age periods as the within-subjects factor, and religious denomination (Protestant or Catholic) in early adulthood as the between-subjects factor to test the hypothesis that belonging to a particular denomination did not have an effect on spiritual development. As expected, there was no significant main effect of denomination on spirituality, $F(1, 95) = 1.22, ns$. The interaction between denomination and age was also not significant, $F(3, 93) = .86, ns$.

Relation Between Spirituality in Older Age and Cognitive Commitment

For the total sample, spirituality in older age (late 60s/mid-70s) correlated significantly with the CAQ-based measure of Cognitive Commitment scored from interview material obtained in early (30s), middle (40s), and late middle (mid-50s/early 60s) adulthood (see Table III). However, a positive relation between spirituality in older age and antecedent measures of cognitive commitment was true only for women. Women who were rated as spiritual in older adulthood tended to be described by trained observers as valuing intellect and independence, verbally fluent, introspective, and having wide interests as early as young adulthood (a time interval of almost 40 years). For men, there was a marginally significant relation between spirituality in older age and cognitive commitment in middle adulthood (40s).

We performed an additional analysis to investigate the relation between spirituality in older age and cognitive commitment in late adolescence for

Table III. Correlation Between Spirituality in Older Age and Cognitive Commitment in Early, Middle, and Late Middle Adulthood

Cognitive commitment	Spirituality in older age		
	Total sample	Women	Men
Period in adulthood			
Early	.20	.21 [†]	.20
Middle	.33	.42	.23 [†]
Late middle	.19	.37	.02

Note. The *N* ranges from 123 to 129 for the total sample, from 65 to 67 for women, and from 58 to 62 for men. Cognitive commitment = CAQ-based measure of cognitive commitment.

[†] $p < .10$. $p < .05$, two-tailed. $p < .01$, two-tailed. $p < .001$, two-tailed.

Table IV. Correlation Between Spirituality in Older Age and Negative Life Events for Four Antecedent Time Periods

Negative life events	Spirituality in older age		
	Total sample	Women	Men
Age period in adulthood			
Teens to early	.19	.23 [†]	.01
Early to middle	.33	.52	.12
Middle to late middle	.22	.18	.19
Late middle to older	.07	.10	.02

Note. *N* ranges from 127 to 130 for the total sample, from 66 to 67 for women, and from 61 to 63 for men. Negative events for the first three age periods are based on ratings of interview transcripts and for the fourth time period are based on self-report.

[†] $p < .10$. $p < .05$, two-tailed. $p < .001$, two-tailed.

the subgroup of 80 participants for whom there were adolescent q-sort data. Spirituality in older age correlated significantly with cognitive commitment in late adolescence for women, $r(40) = .33, p < .05$, but not for men, $r(40) = .24, ns$, or the total sample, $r(80) = .18, ns$.

Relation Between Spirituality in Older Age and Negative Life Events

As shown in Table IV, spirituality in older age correlated with the number of negative events that occurred across three time periods spanning teenage years and late middle adulthood (mid-50s/early 60s). There was no association between spirituality in older age and the number of negative life events occurring in the immediately preceding age period (mid-50s/early 60s–late 60s/mid-70s). When the sample was broken down by gender, it was found that the relation between spirituality and negative life events was true only of women and only for the first half of the adult life cycle (teens to 40s). There was no relation between spirituality and negative life events for men.

Because there was a particularly strong relation between women's spirituality in older age and the number of negative life events that occurred between the 30s and 40s, we conducted follow-up correlational analyses to identify the specific negative life events that contributed to the development of spirituality. We found a significant relation between spirituality in older age and conflict with spouse, $r(67) = .39, p = .001$, and with parents, $r(67) = .27, p < .05$, attending psychotherapy, $r(67) = .41, p = .001$, and experiencing financial strain, $r(67) = .44, p < .001$, when the women participants were in their 30s and 40s.

Table V. Results of Multiple Regressions Predicting Spirituality in Older Age From Antecedents in Early and Middle Adulthood

	Beta weights					
	Total sample		Women		Men	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Early adulthood						
IQ	.10	.10	.09	.03	.19	.23 [†]
Religiosity	.36	.38	.29	.30	.29	.32
Spirituality	.15	.20	.16	.15	.24	.27
Cognitive commitment	.18	.18	.24	.27	.12	.11
Negative life events						
Early-middle adulthood (1)	.22	.18	.43	.36	.01	.05
Middle-late middle adulthood (2)	.13 [†]	.13 [†]	.10	.12	.15	.16
Interaction						
Cognitive commitment negative life events (1)	—	.21	—	.25	—	.20 [†]
<i>R</i> ²	.38	.43	.46	.52	.36	.39
<i>df</i>	(6, 116)	(7, 115)	(6, 58)	(7, 57)	(6, 51)	(7, 50)

[†] *p* < .10. *p* < .05, two-tailed. *p* < .001, two-tailed.

Regressions Predicting Spirituality in Older Age From Antecedent Variables

Table V presents beta weights from multiple regression analyses predicting spirituality in older adulthood (60s/70s) from antecedents in early (30s) and middle (40s) adulthood for the total sample, and for men and women separately. The first model used as predictors measures of IQ, religiosity, spirituality, and cognitive commitment scored from the assessment in early adulthood (30s), and measures of negative life events occurring between early and middle adulthood (30s-40s) and between middle and late middle adulthood (40s-50s/early 60s). Among the six independent variables, the highest correlation was between IQ and cognitive commitment, $r(130) = .37, p < .001$, and the lowest correlation was between cognitive commitment and negative life events occurring between middle and late middle adulthood, $r(130) = .09, ns$.

For the total sample, spirituality in older age was predicted significantly by religiosity, spirituality, and cognitive commitment (but not IQ) in early adulthood. It was also predicted by the number of negative life events occurring between early (30s) and middle (40s) adulthood and at a trend level by negative life events between middle and late middle adulthood. The multiple regression equation for the total sample accounted for 38% of the cumulative variance.

For women, religiosity and cognitive commitment in early adulthood and negative life events occurring between early and middle adulthood were

significant predictors of spirituality in older adulthood. The overall model explained 46% of the variance. For men, religiosity and spirituality in early adulthood were significant in predicting spirituality in older age. The relation between spirituality in older age and IQ in early adulthood was significant at a trend level only. The overall regression equation accounted for 39% of the variance.

In the second model, we added to the initial regression equation an interaction term assessing the joint effect on spirituality in older adulthood of cognitive commitment in early adulthood and subsequent experience of negative life events occurring between the 30s and the 40s. The interaction term was computed by first centering the measures of cognitive commitment and negative life events and then multiplying them by each other.

The addition of the interaction term to each of the three regression equations did not alter the relation between spirituality and the predictors used in Model 1. In addition, the interaction between cognitive commitment and negative life events accounted for statistically significant portions of the variance in the equation for the total sample and for women. Its effect in the sample of men was marginally significant. The overall *R*² for the second model was .43, .52, and .39 for the total sample, women, and men, respectively.

To interpret the meaning of the interaction term, we conducted a follow-up analysis with the use of data for the total sample. As suggested by Aiken and West (1991), we used beta weights from the multiple regression analysis to compute two separate equations for

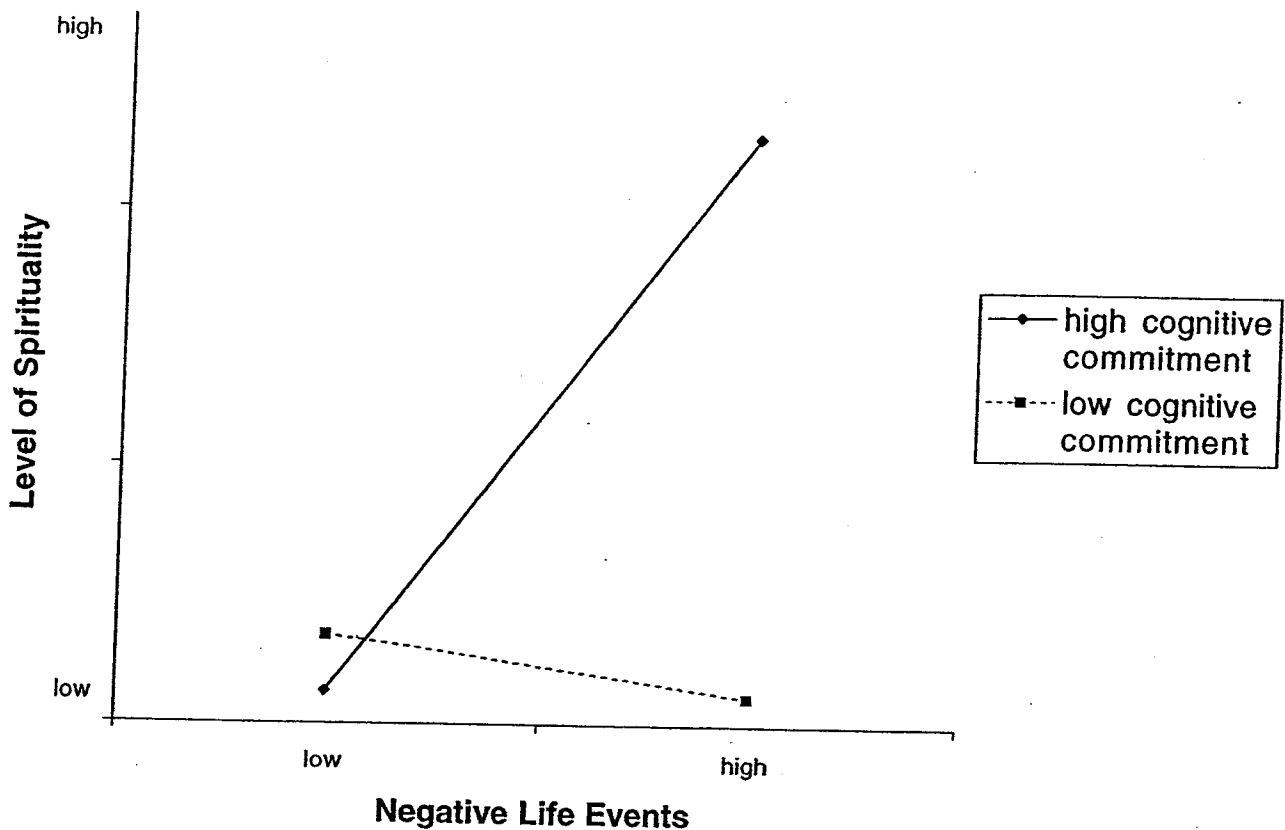


Fig. 3. Level of spirituality as a function of level of cognitive commitment in early adulthood and negative life events between early and middle adulthood.

one standard deviation above and below the mean for cognitive commitment. We then plotted two simple regression lines by solving each of the two equations for scores of one standard deviation above and below the mean for negative life events. Figure 3 displays two simple regression lines depicting the joint effect of cognitive commitment in early adulthood and experience of negative life events in the 30s and 40s on spirituality in older adulthood. A post hoc test of whether the slope of each of the two regression lines differed significantly from zero (calculated by dividing the intercept for each of the two lines by its standard error) resulted in a significant value for the regression line for high cognitive commitment, $t(128) = 2.80, p < .01$, but not for low cognitive commitment, $t(128) = .30, ns$. This means that spirituality in older adulthood was highest among individuals who were cognitively committed as young adults and who subsequently experienced negative life events. Conversely, an absence of negative life events and low levels of cognitive commitment were not conducive to spiritual development.

DISCUSSION

In this study we used longitudinal data to investigate changes in spirituality from early to older adulthood and to inquire into the long-term personality, cognitive, and life event antecedents of spirituality in older age. Before discussing the significance of our findings, we would like to comment on issues associated with the measurement of spirituality in general and in this study in particular.

Spirituality is a difficult concept to measure, in part, because of a lack of consensus about its definition, and in part, because the spiritual journey and associated experiences tend to be intimate, private, and are frequently hard to capture in words. In this study we measured spirituality with the use of a single 5-point scale that involved a combined rating of the participants' spiritual interests and practices. The use of a complex rating scale to capture a complex phenomenon raises inevitable questions of meaning and interpretation. From our analyses, we know that our measure of spirituality was not related to the

participants' level of education or intelligence. This makes it unlikely that our spirituality scale was a proxy for a narrative style characterized by verbal fluency or cognitive complexity that may be associated with being well-educated or having a high IQ. The fact that length of the interview passage accounted for 28% of the variance in spirituality means that, not unexpectedly, highly spiritual individuals as a group tended to have more to say about issues of spirituality and religion than their nonspiritual counterparts. Nonetheless, it is also clear that the rating of spirituality was not a proxy for verbosity. Further, a correlation of around .30 between spirituality and religiosity indicated that these two constructs were quite independent of each other.

Long-term longitudinal studies offer the only possibility of investigating changes in levels of spirituality over the life course. Yet, longitudinal studies inevitably raise concerns about differences in the kind of information that is collected at different time periods. On the one hand, in conducting longitudinal research we should alter our measurement procedures to take advantage of advances in social scientific knowledge (see Pearce & Axinn, 1998), but on the other hand this is frequently done at the cost of interpretive ambiguity. These problems are particularly applicable to spirituality because our familiarity with and sensitivity to spiritual concerns has shifted quite dramatically since the 1950s (see Wuthnow, 1998). It is not surprising, therefore, that in our study we had to contend with the fact that explicit questions about spiritual development were asked only in older adulthood. During earlier assessments the study participants were asked more generally about their religious beliefs and practices.

In spite of these inconsistencies in question wording, we derive confidence in the comparability of our ratings of spirituality from one time period to another. First, the data which we used in our research comes from interview material (rather than answers to structured questionnaires) elicited from participants who, because of their ongoing involvement in the study, had become used to reflecting on and discussing intimate aspects of their life at least since adolescence. The relation between IHD participants and interviewers has always been based on mutual trust, empathy, and openness. Second, the two raters of spirituality demonstrated a high level of agreement. Finally, if our ratings of spirituality were largely an artifact of method variance (i.e., how much information the raters had about spirituality at each assessment), then we would expect the highest ratings to

occur in older age (a time when participants were asked directly about spirituality), and we would expect the lowest ratings to occur in late middle adulthood (a time when there were no explicit questions asked about spirituality in the semistructured interview). As discussed below, however, although levels of spirituality were indeed highest in older adulthood, the remaining pattern of results was much more complex than suggested by a simple method variance hypothesis.

Changes in Spirituality Across the Course of Adulthood

We investigated two distinct types of change in spirituality across the course of adult life. First, we used correlational analyses to report on rank order stability of spirituality at different points in adult life. We found that there was more interindividual fluctuation over time among women than among men. In other words, our data suggested that women who were high in spirituality compared to their peers in late middle adulthood also tended to be high in spirituality as older adults. This was not the case at earlier time periods, however, where there was greater individual change and variability among the women participants. In the case of men, high levels in rank order stability were observed from middle adulthood (40s) onward.

Our second set of analyses involved investigation of mean or group changes in spirituality over time. The results of our analysis of variance pointed to two distinct patterns of change. First, all the participants, irrespective of gender and cohort, showed a significant increase in spirituality from late middle (mid-50s/late 60s) to older adulthood (late 60s/mid-70s). There thus appears to be a general tendency for individuals to become more concerned with issues of spirituality in older age. This overall trend was particularly true of women who scored significantly higher than men on spirituality as older adults. Our findings of a turn toward spiritual interests and practices in older adulthood strongly support theories and findings reported by other researchers in this area. If the quest to find ultimate meaning in life is at all facilitated by signs of mortality, then it makes perfect sense that such a quest should be accelerated following the 50s, a period in life that has been dubbed by Karp (1988) as the decade of reminders.

We found that unlike the monotonic shift from late middle to older adulthood, the patterns of change

in spirituality from early to middle adulthood were more varied based on gender and cohort. In the case of women, for example, the turn toward spirituality occurred earlier and proceeded at a faster rate than in the case of men. As a result, from late middle adulthood onward, but not before this stage, women showed higher levels of spirituality than did men. (We will consider some possible reasons for this gender difference in our discussion of factors that predict spiritual development in older adulthood.)

The relation between spiritual development and sociocultural context is illustrated by the fact that members of the younger cohort showed significant increases in spirituality from early adulthood onward, whereas members of the older cohort increased significantly in spirituality only from late middle to older adulthood. What accounts for the greater spiritual openness among members of the younger cohort? Although our data do not allow us to disentangle these cohort effects directly, it is likely that members in the younger cohort developed spiritual interests earlier in life as a response to the cultural shift that occurred in American society beginning with the 1960s. Our younger participants were only in their early 30s when the 1960s began. It could be argued following Levinson (1978) that they were, therefore, still grappling with the task of formulating their first stable adult identity structure. If this were indeed the case, then they should have been more responsive to the changing sociocultural climate than members in the older age cohort who were in their 40s during the social turbulence of the Sixties.

As expected we did not find an effect of denomination (Protestant vs. Catholic) on changes in spirituality over the life course.

Finally, it is important to note that we found overall low levels of spirituality among the study participants. Across all four interviews, the mean scores on the 5-point spirituality scale ranged from just over 1 to just over 2. Thus, only a few of our participants exhibited the type of involvement and experiences that are characteristic of higher stages of spiritual development. This restriction in range is not unusual in research using normal samples to study constructs associated with higher stages of development. A similar pattern of low mean scores has been reported by Baltes and collaborators (e.g., Baltes, Staudinger, Maercker, & Smith, 1995) in their research on wisdom, and in studies of the integrative complexity of political debate (e.g., Tetlock, 1983) and abortion rhetoric (e.g., Dillon, 1993).

Predicting Spirituality in Older Age From Factors in Younger Adulthood

Our final analyses dealt with predicting spirituality in older adulthood from personality, cognitive, and life event data collected in early and middle adulthood. Our findings once again confirm hypotheses derived primarily on the basis of retrospective case studies and interviews. We found that in the case of both women and men, spirituality in older age (late 60s/mid-70s) was significantly predicted by measures of religiosity scored from interview data in early adulthood (30s). In the case of men there was also a significant relation between spirituality in younger and older adulthood. These findings support the idea that early religious involvement tends to prime or predispose individuals to further spiritual development.

In the case of women, but not men, we found a relation between cognitive commitment and negative life events in early adulthood and subsequent spiritual development in older adulthood. In other words, spiritual development in later life tended to occur in women who as younger adults were introspective, insightful, psychologically minded, and who tended to think unconventionally. In fact, a supplementary analysis correlating spirituality in older adulthood with cognitive commitment in a subsample of 40 women for whom there was adolescent q-sort data showed that the relation between these two variables was significantly related over a period of over 50 years.

Experiences of adversity such as external conflict with family members, internal conflict and pain that resulted in seeking psychotherapy, and financial difficulties also facilitated spiritual development. It is interesting to note that spiritual development was related to the experience of negative life events in the first half of adulthood but not the second half. In this study, midlife emerges as the pivotal stage of personal crisis for spiritually oriented women. Why should this be the case? Perhaps as individuals grow older it becomes progressively more difficult to transform adversity into a source of personal growth. Alternatively, it may be the case that incidences of personal conflict and turmoil decrease past midlife. The fact that negative life events proved to be a stronger predictor of spirituality in older age for women than for men may have to do with the greater discontinuities and personal adversities experienced by women born in the 1920s.

The interaction between cognitive commitment and negative life events significantly predicted spirituality in older age for both women and men, although

for men this relation was significant at a trend level only. This interaction effect was due to the fact that the confluence of high cognitive commitment in early adulthood and the experience of a high number of negative life events from early to middle adulthood had a positive effect on levels of spirituality in older adulthood. High cognitive commitment on its own (when not accompanied by negative life events) and the experience of a high number of negative life events on its own (in the absence of cognitive commitment) did not predict spirituality. The above-described interaction supports the idea that spiritual development is particularly characteristic of individuals who possess the necessary psychological sensitivity and strength to be able to transform personal pain and sorrow into a deeper understanding of life's mysteries.

It is important to note that the regression equations for both women and men accounted for a substantial proportion of the variance in spirituality. This means that (a) there is a considerable orderliness about who embarks on a spiritual quest and who does not; and (b) religiosity, an early adulthood personality that is characterized by cognitive commitment, and the experience of negative life events in early adulthood are all powerful predictors of spiritual development 40 years later. The fact that spiritual development tends to occur in individuals who are psychologically minded, invested in the world of ideas, and who tend to experience adversity in their lives raises the issue of the relation between spiritual development, wisdom, and postformal stages of cognitive development, because all of these constructs have been associated with similar personal life event antecedents (see Baltes et al., 1995; Wink & Helson, 1997, for characteristics associated with the development of wisdom). Shulik (1988) may be right in claiming that there is a central process that accounts for spiritual, ego, and cognitive development in adulthood. Nonetheless, further research is needed to try to understand factors that are common and that differentiate these various developmental processes.

In conclusion, as already indicated, doubts have been raised about the feasibility of conducting quantitative research into the meaning of spirituality and its development. In view of these concerns, it is gratifying that we were able to use quantitative longitudinal data to replicate, substantiate, and in part extend findings based on qualitative case studies. Our results support the general view that spiritual development tends to occur in the second half of adult life, and that it is enhanced by the combination of being a

psychologically minded and unconventional individual who has also experienced discontinuity and adversity. Our data also suggest that spiritual development does not occur in a vacuum and is not an undifferentiated process. Rather as suggested by Wulff (1993), the process of spiritual growth is complex and multifaceted. It has different trajectories in women and men, and it is responsive to the sociohistorical context in which human lives are lived. In this sense, spiritual development presents us with the paradox of a pattern of growth that appears to be both contingent and universal.

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